

Signage and Wayfinding Design of DR. H. Kumpulan Pane Regional General Hospital in Tebing Tinggi North Sumatera

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ABSTRACT

The General Hospital Dr. H. Kumpulan Pane is a type B hospital with the largest and the most complete facilities compare to other hospitals in Tebing Tinggi, North Sumatera. Signage and wayfinding in this hospital have not been well integrated. There are a lot of signage which is small so that the text and symbol that are unclear, installation of signage are not proper, the color used are not appropriate and typography used are different. Those signage and wayfinding make people difficult to find direction and found the location so that signage have not been effective. This study used field observation, interviews and questionnaires to collect data, as well as comparison matrix to analyze data. The signage design is created by combining text and symbols (pictograms). The theme used is clean, hygienic and simple in accordance with the identity of the characters of the hospital. The shape used on the signage is taken from the shape of the hospital logo and colors taken from the typical icon from North Sumatera namely kenanga flowers and parrots. The color obtained are yellow, black and white, so that the results of signage has its own character. The results are expected to design signage that could help patients and hospital visitors in finding the intended location and improve the services in this Dr. H. Kumpulan Pane Hospital in Tebing Tinggi North Sumatera.

Keywords: Signage, Wayfinding, Hospital.

ABSTRAK

Rumah Sakit Umum Daerah (RSUD) Dr. H. Kumpulan Pane adalah rumah sakit tipe B yang terbesar dan terlengkap dibandingkan rumah sakit lainnya di Kota Tebing Tinggi Sumatera Utara. Signage di rumah sakit ini belum terintegrasi dengan baik. Banyak terdapat signage yang berukuran kecil sehingga tulisan dan elemen visual lainnya yang tidak jelas, pemasangan signage juga belum tepat, warna yang digunakan tidak sesuai dan tipografi yang dipakai berbeda-beda. Signage yang seperti ini membuat pengunjung kesulitan untuk mencari arah dan menemukan lokasi yang dituju, sehingga signage yang ada menjadi kurang efektif. Studi ini menggunakan metode observasi, wawancara dan kuisioner untuk mengumpulkan data, serta matriks perbandingan untuk menganalisis data. Perancangan signage dibuat dengan menggabungkan tulisan dan simbol (piktogram). Tema yang digunakan adalah bersih, higienis dan simpel sesuai dengan identitas karakter dari rumah sakit. Adapun bentuk yang digunakan pada signage diambil dari bentuk logo RSUD Dr. H. Kumpulan Pane dan warna diambil dari ikon yang khas dari Sumatera

Utara yaitu bunga kenanga dan burung beo. Warna yang didapat adalah warna kuning hitam dan putih, sehingga hasil signage mempunyai karakter tersendiri. Hasil perancangan signage ini diharapkan dapat membantu pasien dan pengunjung rumah sakit dalam mencari lokasi yang dituju dan meningkatkan pelayanan yang ada di dalam RSUD Dr. Kumpulan Pane Kota Tebing Tinggi Sumatera Utara.

Kata Kunci: Signage, Wayfinding, Rumah sakit.

INTRODUCTION

Every day, public facilities visited by many people, whether just visiting or those who are working in that place. Many buildings such as hospitals, terminals and airports, office buildings, supermarkets and other public facilities require signage and wayfinding. The problem that often arise when inside the building, including hospitals, is people who were inside the building can be confused in finding directions, especially in conditions of panic. According Kusrianto (2010: 23) in Christianna (2012), signage is a type of visual graphics created in large size to deliver specific information on certain people.

Signage is useful to help people inside the building be able to easily search for directions and they can quickly find the intended location. Gibson (2009: 18) argues that signage must be clearer in legibility to create a communicative and informative signage. Signage should also be made based on Standard Operating Procedure (SOP) to perform its function as the directions. This study focused on signage in Dr. H. Kumpulan Pane General Hospital Located in the center of the Tebing Tinggi City, North Sumatra. The name of this hospital is taken from the name of public figures as well as to commemorate the services of one of the native doctor who practices in the city. This hospital is the largest B type hospital and has more complete facility than other hospitals in Tebing Tinggi. Although this hospital is the largest public hospital in Tebing Tinggi, this hospital still uses signage that has not been well integrated. There are still small signage that cause unclear legibility. Besides the signage installation that seems improper, by the use of inappropriate colors and different typographies.

This signage conditions are hard to recognize and understand. Visitors have difficulties to look up directions and finding the desired location, as a result, the existing signage often ignored. Most visitors prefer to ask the officer in the hospital instead of having to follow the existing signage (Figure 1)



Figure 1 Example of Signage at RSUD Dr. H. Kumpulan Pane
Source: Situmorang dan Swasty, 2016

From the above explanations, then the problem identification can be obtained that there are some signage that are difficult to recognize, as a result the signage are not communicative and informative according to its function. In addition, the signage in RSUD Dr. H. Kumpulan Pane are poorly integrated. Another problem is the legibility of signage unclear due to the small size, color is not appropriate and the typography used is different. Another problem is unclear legibility of the signage due to the small size, inappropriate color and the different types of typography used.

From the description above, then the obtained problem statement is "How to create signage that can be easily recognizable and informative at the General Hospital Dr. H. Kumpulan Pane?" The objectives in this study is to design signage that is easily recognizable and comprehensible so that visitors and users inside of RSUD Dr. H. Kumpulan Pane can finding direction and knowing the position so they can find the location in the hospital faster.

LITERATURE STUDY

Signage is known as the directions guide as well as route guide, location guide, or information guide. Signage is used to direct or inform of a certain place in a building. Along time, signage become a broader essential and not merely identifying areas. According Calori (2007: 5), signage and wayfinding are tools as a direction guide to a desired location within that location area. Signage is divided into several types, namely identification sign, directional sign, regulatory sign, interpretative sign, warning sign and operational sign. Gibson (2009: 13) argues that the signage system must assemble certain place - either commercial, public, or private – so it can be tracked regularly even when in crowd situation. Signage good at presenting explicit signs, information, along with a clear symbol which as a whole is able to communicate quickly and effectively. From the theory that has been described above, it was concluded that the signage is a communication tool to help everyone as a directional guide to find the intended location.

Dimension is a signage design factors that need to be considered. Dimensions in this regard is the measurement of the visibility to determine the height of signage installed. Calori (2007:161) explained that visibility to see signage is divided into two, the first is the eye-level zone (visibility equivalent with the eyes, and the second is the overhead zone (visibility above the head). The size of the height of signage to eye-level is 90 cm to 180 cm from the floor surface, while for overhead is 180 cm to the top from the floor surface.

Readability of a text in the signage is very important in order for messages that are on the signage can be read clearly. The type of the letter that is often used for signage is the Sans Serif letter type. This is due to the experts realized the form Sans Serif font type is easier to read than other font types.

The layout also illustrates the visual character of a signage. Calori (2007:131) also states that in the layout development of the signage, there are aspects that affect the design of the main design as well as the overall size and proportions of layout. These aspects include: (1) the proportion of symbols and arrows with text, (2) the position of the symbols and arrows with text, (3) the distance between one graphic elements to another, and (4)the layout format.

Other design elements that should be considered is the color. Color is the elements that play an important role in designing signage. Color ease people to see the signage, moreover for a contrast colors and comfortable to be seen. According Wibowo (2013: 148), color is one of the important element in the design work. With the existence of color, a design works will have a meaning or more value. According to Calori (2007:129), the use of color to convey communication in signage is pointing to the color code. The color codes used are colors that are already established as an international standard color for signage. To communicate the message through signage, messaging and color selection code must be adjusted so that an effective message is received by the respondent. An example of a message that adjusted with the color code that is the red color is used for the prohibition warning or stop messages. Next, the green color is used to convey the message the way out or evacuation route.

METHOD

The study was carried out from January to July 2016 at the Hospital Dr. H. Kumpulan Pane Tebing Tinggi North Sumatra. In this study, the data collection methods used are literature studies, observations, interviews and questionnaires. Literature study is used as a data source that can underlie the signage design process. The data source used is from the theory book and academic journals concerning the signage design.

Observation was carried out using the theory of observation which is observation directly to the Hospital Dr. H. Kumpulan Pane for a closer look at the research object. Besides, the observation was conducted to determine the advantages and disadvantages of existing signage at the Dr. H. Kumpulan Pane Hospital in Tebing Tinggi.

Interviews were conducted to obtain information directly from the interviewees to the question and answer process. In this case, the interview was conducted to doctors and security guards at RSUD Dr. H. Kumpulan Pane Tebing Tinggi Head of Layout Room Management in the Public Works Bureau, signage designer and lecturer of Visual Communication Design course.

The questionnaire used to clarify the existing problems as well as to determine the level public awareness of the signage. Questionnaires filling addressed to doctors, nurses, patients, visitors and managers in the RSUD Dr. H. Kumpulan Pane in Tebing Tinggi. Whereas analyzing the data used for comparison matrix that compares the signage design found on RSUD Dr. H. Kumpulan Pane in Tebing Tinggi with similar hospitals such as Boromeous Hospital in Bandung and Immanuel Hospital in Bandung.

FINDINGS

Based on the hospitals classification, RSUD Dr. H. Kumpulan Pane in Tebing Tinggi classify in the B class. The hospital is able to provide medical specialists services and limited subspecialists. The hospital also accommodates referral services from the district hospital.

The questionnaires were distributed by targeting 10% of the population of patients and hospital visitors RSUD Dr. H. Kumpulan Pane per day. The number of patients and hospital visitors average of 250 people each day, thus that when taken from the 10%

target of them is 25 people. The number of respondents 100 patients or visitors of which questionnaire was distributed during the 4 days. Respondents were dominated by patient or visitor aged 25-45 years, most of them are private sector employees. The most education level of them are high school which is more 55 people and the second is Diploma / Bachelor is as many as 32 people.

88 respondents chose to ask the officers rather than seeing signage hospital. As much as 45 respondents expressed difficulty in finding locations on when in the hospital. A total of 45 respondents expressed difficulty in finding the location when in the hospital. While 54 other respondents said that the signage in the hospital has been helpful in finding locations. However, 54 respondents who answer signage already help and easily understood are included in the 88 respondents groups which choose to ask the officer. They should have to pay attention to signage because they agree that the existing signage has helped them in finding locations. This may have something to do with the education level of respondents.

However, respondents who answered having trouble in finding a room naturally ask to the officer moreover they agreed that the existing signage does not help in finding the location and find it difficult to be understood. A total of 81 respondents agreed that the existing text on the signage is clear in legibility; however 72 of the 81 respondents are people who choose to ask the officer. Signage that contain images and text to be preferred by respondents consisted of 31 people aged 25-35 years, 33 people aged 35-45 years and 4 people aged more than 45 years. From the results of respondents' answers can be concluded that the respondents understand better on signage that displays text and images at once because they are easier to recognize and understand for signage that contained text and images.

In an interview about signage with dr. Dalton - one of the doctors who practice at the hospital – he revealed that visitors often ask the place or location where they were going. The most frequent questions by visitors and patients are where to register and BPJS counter. The reason of the patients and visitors asked the officer is because the registration and the BPJS counter located in the central part of the location in Dr. H. Kumpulan Pane Hospital. In addition, there is no detailed directions to indicate the location of both place. Dr. Dalton (2016) also says that that every visitor or hospital patients who asked the location that they want to go didn't too interfere with their performance at work. For a visual identity that existed at the hospital, Dr. Dalton (2016) suggested to create a logo or hospital's sign, for example the signage near the hospital entrance, so that people know Dr. H. Kumpulan Pane Hospital.

In an interview with M. Rashid Hasibuan as a security guard at Hospital Dr. H. Kumpulan Pane, Hasibuan (2016) explains that many visitors or hospital patients who asked the location of BPJS. Usually, visitors or patients who often asked are the people from outside of the Tebing Tinggi City. He also explained the same thing as dr. Dalton about the BPJS counter which is located in the center of the hospital. That makes the visitors or patients who come commonly asked the officer in the hospital. Hasibuan (2016) said that the writings on the signage in the hospital is clear in legibility. Visual identity is needed to be applied on signage especially in the front area of the hospital so that the society know Dr. H. Kumpulan Pane Hospital. Related to the improvement of hospital facilities, level 3 building will be constructed to meet the needs of hospital service of Tebing Tinggi City society.

Interviews were also conducted with Rudi as Head of Management of Room Layout in the Public Works Department. Rudi (2016) explains that in making signage of which is

accounted is the selection of a contrast color and text in the signage that clear in legibility. The main reason patients or the visitors ignore the signage for the existing signage is not attractive, consequently patients and visitors are reluctant to read it and take simple steps by asking the officers. According to Rudi (2016), signage which tend to attract attention is the signage that clearly in writing. Signage also needs to display icon or image to supports the legibility of signage writing and will be easily to be understood by patients and visitors. Many signage is just a form of writing but often overlooked because if there is uncommon language in the society, can make people confused.

The material selection for signage is usually determined by the budget provided by the hospital. Therefore if the budget that is given by central is limited, the choice of materials also adjusted to the existing budget. Usually, if the budget is limited, the material used is a material derived from a type of plastic or fiber. For placing the position on outdoor, the signage usually placed higher; e.g. emergency signage at the entrance. However for signage that is in the room is better adjusted to people's eyes. Rudi (2016) explained tips for making interesting signage on limited budget is to keep adjusting the material that fits your budget, but the selection of contrasting color is needed to attract the attention of patients and hospital visitors.

Interviews were also conducted with Endra Waskito as in-house designer at Gusto Sign. Waskito (2016) suggested that to create signage that is easily recognizable by hospital patients and the visitors is to make informative signage and simple graphics. What meant by Informative is the signage legibility that is clear and the use of simple graphics so that patients and visitors understand the presence of that additional simple graphics. If the graphic made too detail, the visual appeared can confuse the reader. The factors that make patients ignore the signage is because there is less informative signage. Signage which tend to attract attention is the signage that has bright colors, unique shapes and attractive graphics.

For the ideas and concepts selection to create signage can be taken from the visual elements that exist in the hospital for example color, shape, or ornaments around the hospital. Waskito (2016) also pointed out that visual identity is also important applied on signage, but the most important is the signage that is informative. The difficult thing in designing signage is when the client asks for a low price with an attractive design, and a design that does not match with the building condition. If the budget of a company is big, they can have an expensive material and vice versa.

Another thing that must be considered in choosing a signage placement at any location is by reviewing the entrance channel to a building to the exit of the building in order to know where the strategic position of signage to be seen. How to create interesting signage but a limited is by presenting the graphics and color contrast. Usually the colors used for hospital are bright colors such as white, light green, light blue and other toska colors. Moreover, it can be solved by technical and material selection which is cheaper such as cutting sticker and choosing material from plastic or acrylic.

Interviews were also conducted with Arry Mustikawan as Lecturer in Visual Communication Design Program at Telkom University. Mustikawan (2016) explains that making the signage should be adjusted to target / respondent who read the signage. Signage adjusted by age, education level and so on, so that the signage can be understood by the public.

The factors of society that didn't want to pay attention to the signage is because the existing signage is less clear and is not visible. Good Signage is signage that can be easily recognized and easily accessible to everyone so that they can attract the attention of readers. The concept of the design of signage can be taken from existing graphic elements of the logo, the shape of the building, or the color of the building. The difficult thing in designing signage is how to create signage that is easily understood by the reader.

For the selection of signage material adjusted to indoor or outdoor location. When the installation at indoor, lightweight material can be used while for outdoor is adjusted to outdoor weather which material should be water and sun heat resistant so the signage can last longer. Mustikawan (2016) also explained that for the placement of the signage must be through research and finding the target/ respondents who read, therefore the can be effective as its function. The easiest way to make an attractive the signage with a limited budget is to use acrylic material or cutting sticker. For visual the signage itself depends on the designer's creativity in designing signage.



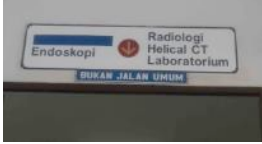
From the interviews, it can be concluded that the signage that is both informative, easily recognized and understood by patients and hospital visitors. Signage should be adjusted to the respondents who will see the signage so that the messages of the signage can be received by the respondent. The signage placement and selection of materials and can be adapted to the type of location or building such as indoor or outdoor. The idea of designing signage can be taken from the visual elements that exist in buildings such as the colors of the buildings, ornaments and logo. A suitable color for signage in the hospital are bright colors such as light blue, light green and other toska colors. To create an attractive signage with a minimal budget, can be resolved by the selection materials that are cheap and utilize the graphic design.

After the data is collected, the design audit is carried out by documenting every type of signage in the RSUD Dr. H. Kumpulan Pane Tebing Tinggi then compared with Borromeo Hospital and Immanuel Bandung Hospital. Table 1 shows the analysis of signage at all three hospitals that are observed.

Directional Signs			
	RS. Dr. H.K. Pane	RS. Borromeus	RS. Immanuel
			

Typography	The font used is Serif fonts and the font legibility is quite clear.	The font used is Sans Serif fonts. Readability is clear because a dark background to support it readable bright and viewable from a distance.	The font used is Sans Serif fonts. Readability is clear because it uses large font size so that the it can be seen from a distance.
Color	The blue color that is used is less supportive of signage legibility from afar because of the background color and text are equally bright.	The colors used are good as the dark background supporting the signage legibility.	Color has been fitted with color coding, red for emergency situations and blue as code to show the way. light Blue that is used addressed with large font size, to make the clear legibility.
Pictogram	Does not have pictogram.	Having a Pictograms making it easier to understand.	Does not have pictogram.
Layout	Align center	Align left	Align center for the IGD and Align left for evacuation route signage
Material	Acrylic and iron	Acrylic, iron and polycarbon	Acrylic









Identification Signs

	RS. Dr. H.K. Pane 	RS. Borromeus 	RS. Immanuel 
Typography	Font used is Serif fonts and the legibility is clear due to a large font size.	The font used is Sans Serif fonts and the legibility is clear.	The font used is Sans Serif fonts and the legibility is clear.
Color	The colors used are less compatible since it uses a dark color so that prone to be not legible especially in a dark room.	The colors used are already good as the background color support readability with brightly colored text.	The colors used is good, because the background is white combined with dark text color.
Layout	Align center	Align center	Align left and right
Material	Flexi	Polycarbon	Acrylic

Interpretive Signs

	RS. Dr. H.K. Pane	RS. Borromeus	RS. Immanuel
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60 **Rama Sadrah Situmorang, Wirania Swasty:** Signage and Wayfinding Design of DR. H. Kumpulan Pane Regional General Hospital in Tebing Tinggi North Sumatera

			
Typography	Font used is Serif fonts and the legibility is clear.	The font used is Sans Serif fonts and the legibility is clear.	The font used is Sans Serif fonts and the legibility is clear.
Color	The colors used is monotone so it unattractive to be seen.	The colors used in combination with other colors so the readers know where the important rooms are.	The colors used is varied so that the reader is interested to see.
Material	Paper	Paper and acrylic	Paper
Operational Signs			
	RS. Dr. H.K. Pane 	RS. Borromeus 	RS. Immanuel 
Typography	Font used Sans Serif, the legibility of the text is clear and interesting to be seen.	Font used is Sans Serif fonts. The text is less legible because it is coated with a material that reflects light.	The font used is Sans Serif fonts and the text legibility is clear.
Color	The colors used is varied so that invite people to read.	The use of dark background colors to support legibility.	The use of signage color is good.
Layout	Align center	Align center	Align center
Material	Sticker	Acrylic	Acrylic
Regulatory and Prohibitory Signs			
	RS. Dr. H.K. Pane 	RS. Borromeus 	RS. Immanuel 
Typography	Font used is Sans Serif, but legibility is	The font used is Sans Serif fonts and the	The font used is Sans Serif fonts and the




	Less because of its small size and the placement of signage is in the middle of the park.	legibility is clear.	legibility is also clear.
Color	The colors used clearly appropriate with the color coding for warning signage.	The colors used clearly appropriate with the color coding for warning signage.	The colors used clearly appropriate with the color coding for warning signage.
Layout	Align left	Align center	Align center
Material	Flexi	Acrylic	Acrylic
Pictogram	Pictogram used is in compliance with ISO. But it is not clear in legibility.	Pictogram used is in compliance with ISO and the legibility is clear.	Pictogram used is in compliance with ISO and the legibility is clear.
Warning Signs			
	RS. Dr. H.K. Pane 	RS. Borromeus 	RS. Immanuel 
Typography	Typography used is Sans Serif font.	No text.	Typography used is Sans Serif font.
Color	The colors used is appropriate with the color coding for warning signage.	The colors used is appropriate with the color coding but lack of text.	The colors used is appropriate with the color coding for warning signage.
Layout	Align center	Align center	Align center
Material	Acrylic	Acrylic	Acrylic
Pictogram	Pictogram used is in compliance with ISO and the legibility is clear.	Pictogram used is in compliance with ISO but lack of text.	Pictogram used is in compliance with ISO and the legibility is clear.

Table 1 Comparison Matrix
Source: Situmorang and Swasty, 2016

From the data matrix analysis above, it can be concluded that the signage type of directional signs, identification signs, interpretative signs and regulatory signs which are easier to understand is signage in Borromeus Hospital. Operational signs which easier to understand is in Immanuel Hospital, while for warning signs is signage in the Dr. H. Kumpulan Pane Hospital and Immanuel Hospital that fairly easy to recognize. The material selection also must be adjusted to the material that does not reflect light so that the legibility of the text can be clearly seen. Existing content on the signage is also better by combining pictogram according to ISO and sans serif text type so that the signage is easily recognizable and understandable.

RESULTS AND DISCUSSION

Patients and visitors who come to the hospital are usually in a state of panic and rush. Many signage at the Dr. H. Kumpulan Pane Hospital in Tebing Tinggi North Sumatera are still unclear in legibility so the patients and visitors are not able to understand the existing signage. According to Effendy (1993) the purpose of communication consists of communication to be informing, persuasive, education, and influence. For the signage design, informing communication concept is selected of which the signage aims to provide information to the respondents in the hospital. The objective of this informing communication is the patient or hospital visitor at Dr. H. Kumpulan Pane Hospital, Tebing Tinggi. Patients and visitors are mostly aged 25-45 years. From the questionnaire analysis, the average education level of patients and visitors are senior high school. The patient's and hospital visitor's habit that prefer to ask the officer than seeing the signage when they feel difficult to find the location. By using the concept of informing communication patients and visitors can understand the messages of the signage.

From the mind mapping that have been made, the creative concept gained is the theme that will be used in the signage design. The selected theme is a theme that is clean, hygienic and simple in which the hospital always identical with these three keywords. On the signage design, for displaying freestanding sign, suspended sign and wall mounted sign will be given the yellow colored cananga flowers pattern outline which resemble batik and will be made on the part of the signage which colored gray black. Cananga flower is one of the iconic characteristic of North Sumatra so the signage besides serving as a medium of communication can also simultaneously display the character with the pattern of the North Sumatra.

While the form of signage is taken from one of the hospitals logo that is a pentagon, but at each corner was made rounded to impress friendly and is not rigid. Patients and hospital visitors came from various ethnic, including Javanese, Batak, Padang, Malay and Chinese. Therefore the message must lead to a general respondents. Psychographics of patients and visitors on average are not too concerned by their own typical regions, so the signage is intended to deliver the directional message as well as introducing characteristic of North Sumatra through cananga flower pattern. The forms were obtained on the hospital logo that are pentagon, triangle and square.

There are two types of images displayed on the signage, namely pictogram (symbol and arrows) and Cananga flower motive. Cananga flower motive is used as a graphic element on some signage design types that is made (Figure 2).



Figure 2 Cananga Flower Pattern
Source: Situmorang and Swasty, 2016

The shape which applied to the signage obtained from logo elements of the Dr. H. Kumpulan Pane Hospital consisting of pentagon, triangles, and rectangles. From those three forms, the authors chose the pentagon as the writers inspired of the nurse's hat shape in the commonly hospitals.

The colors taken from the logo is green, yellow, red and white. Colors obtained from the hospital's elements logo where there is the green color, yellow white and red. The addition of color was also taken from the typical color of the icon of North Sumatra, namely black from nias parrot and yellow colors from Cananga flower. This color is also combined with the color coding, which is according to international standards for the signage design. The purpose of color coding is also used because these colors is appropriate to each function from the signage, so the signage did not miss from its function.


The color that is on the level of message, are used for signage that deliver message of the existing regulations in hospitals and messages in an emergency. Some examples of signage that uses this color is the wall mounted signage which typically contains the message of "no smoking", "beware of radiation", "fire extinguisher", and to freestanding signage that shows the location IGD.

For the color location markers used for signage in the form of flags mounted and wall mounted, so each room grouped by using these colors. The pupose is for patient or visitor can find rooms in the hospital. The blue color for wall mounted types signage as markers for Inpatient rooms, yellow for flag mounted type signage that is used the doctor's office and clinic, purple for the toilet or warehouses, as well as green for nurse rooms. While for black, yellow and white color on the bottom of the image, is used for the main color signage. The reasons for selecting yellow, black and white, because yellow color create a characteristic impression of Cananga flower color. The black color represents the color of Nias parrot and white colors give the impression of clean, hygienic and simple. Yellow signage combined with black is placed in semi-outdoor area so that patients or visitors can easily see it from near or afar with that yellow color. For white color, is entirely placed in the room such as flag mounted and wall mounted type of signage.

Typography used on designing signage is a Sans Serif font. The reasons for selecting Sans Serif font for typography is easier to read the text from near and afar. Sans Serif font also creates the impression of simplicity and novelty. Typography used to design signage is Helvetica. Helvetica has enough between the texts, consequently the text are easier to read.

The materials used for signage is acrylic, cutting sticker, iron plates and polycarbonate. The reason for choosing these materials is to minimize production costs. Acrylic and cutting stickers used on the signage that placed indoor while the iron plate and polycarbonate used on signage that placed outdoors. Acrylic and cutting sticker also does not reflect light so it does not interfere with the legibility of the text on the signage. For the outdoor signage is adjusted to the material so that the iron plate and polycarbonate signage resistant from the hot weather or rain. Freestanding sign with the interpretive and directional signage is created with neon so during the night can be seen.

Table 2 shows the programming of the overall signage design which contains the mounting system type and messages to be delivered.

Num.	<i>Sign Type</i>	<i>System</i>	<i>Message</i>	<i>Arrow</i>
A1	<i>Identification Sign</i>	<i>Freestanding</i>	Dr. H. Kumpulan Pane Hospital	
A2	<i>Identification</i>	<i>Wall</i>	Inpatient Room Name	


	<i>Sign</i>	<i>Mounted</i>		
A3	<i>Identification Sign</i>	<i>Flag Mounted</i>	Doctor Room Name	
A4	<i>Identification Sign</i>	<i>Wall Mounted</i>	Toilet pictogram	
A5	<i>Identification Sign</i>	<i>Wall Mounted</i>	smoking area	
A6	<i>Identification Sign</i>	<i>Suspended</i>	Information	
B1	<i>Directional Sign</i>	<i>Freestanding</i>	Directions	
B2	<i>Directional Sign</i>	<i>Wall Mounted</i>	Directions	
B3	<i>Directional Sign</i>	<i>Wall Mounted</i>	Directions	
B4	<i>Directional Sign</i>	<i>Suspended</i>	Directions	
B5	<i>Directional Sign</i>	<i>Wall Mounted</i>	Evacuation route	
C1	<i>Regulatory Sign</i>	<i>Wall Mounted</i>	No Smoking	
C2	<i>Regulatory Sign</i>	<i>Freestanding</i>	No entry	
C3	<i>Regulatory Sign</i>	<i>Wall Mounted</i>	No littering	
C4	<i>Regulatory Sign</i>	<i>Wall Mounted</i>	No Taking Pictures	
C5	<i>Regulatory Sign</i>	<i>Freestanding</i>	Parking Area	
C6	<i>Regulatory Sign</i>	<i>Freestanding</i>	No parking	
D1	<i>Interpretative Sign</i>	<i>Freestanding</i>	Hospital blueprint	
E1	<i>Operational Sign</i>	<i>Wall Mounted</i>	Clinic Hours	
E2	<i>Operational Sign</i>	<i>Wall Mounted</i>	Patients Visiting Hours	
F1	<i>Warning Sign</i>	<i>Wall Mounted</i>	Fire extinguisher	
F2	<i>Warning Sign</i>	<i>Wall Mounted</i>	Beware of Radiation	

Table 2 Signs Programming
Source: Situmorang and Swasty, 2016

While Figure 3 shows the placement of signage on one of the floors at the main building which has been adjusted to the programming that have been prepared.

The following is the result of signage design for the General Hospital Dr. H. Kumpulan Pane in Tebing Tinggi. The design of identification sign, there are four types namely freestanding sign, suspended sign, wall mounted sign and flag mounted sign.

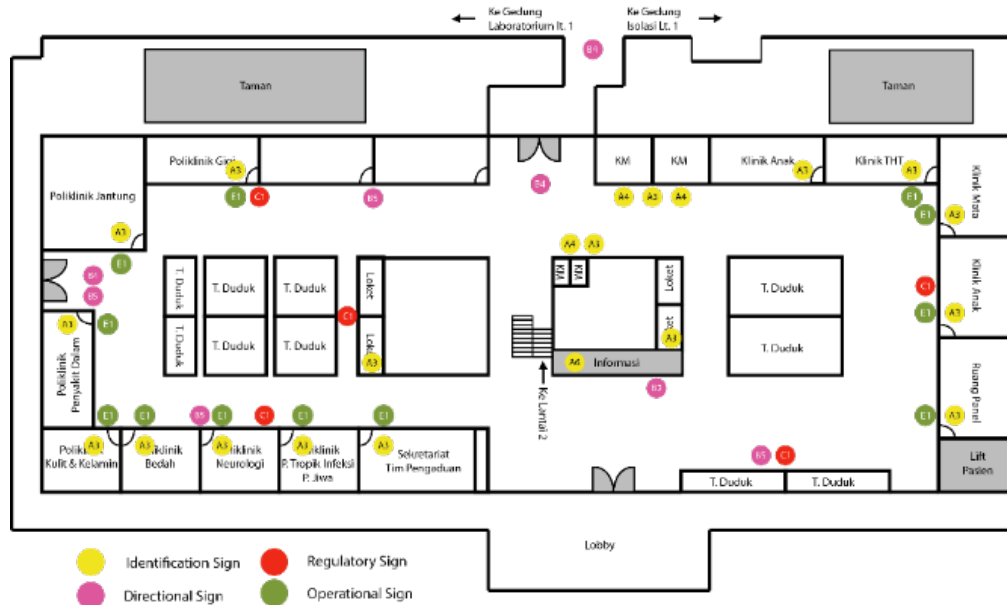
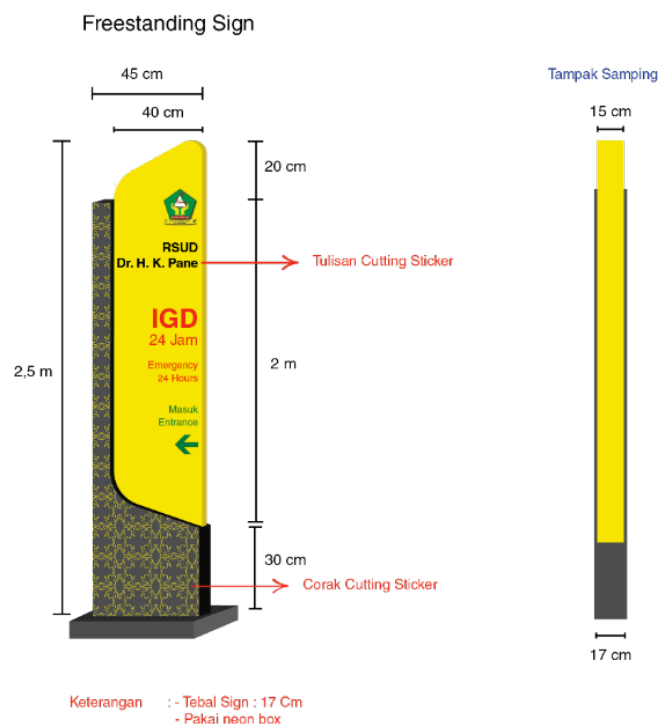


Figure 3 Site Plan Main Building, First Floor
Source: Situmorang and Swasty, 2016

For freestanding sign is created using acrylic material and there is a frame inside, so that the final result is in the form of signage with neon box models. the suspended sign type are made with acrylic and hung with iron chains. Flag mounted sign is made with acrylic and attached with additional material such as iron to connect the signage on the wall. Signage is differentiated by additional material which is on top of it by using colors that have been specified. For wall mounted sign is made with acrylic material and visual from the cutting sticker. The pattern found in freestanding sign and the suspended sign are made with batik but with Cananga flower outline pattern, so the signage displays the distinctive character from the their own region (Figure 4).



66 **Rama Sadrah Situmorang, Wirania Swasty: Signage and Wayfinding Design of DR. H. Kumpulan Pane Regional General Hospital in Tebing Tinggi North Sumatera**

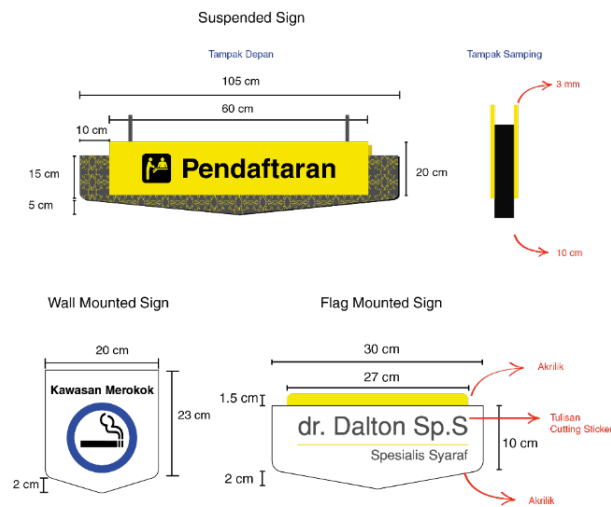
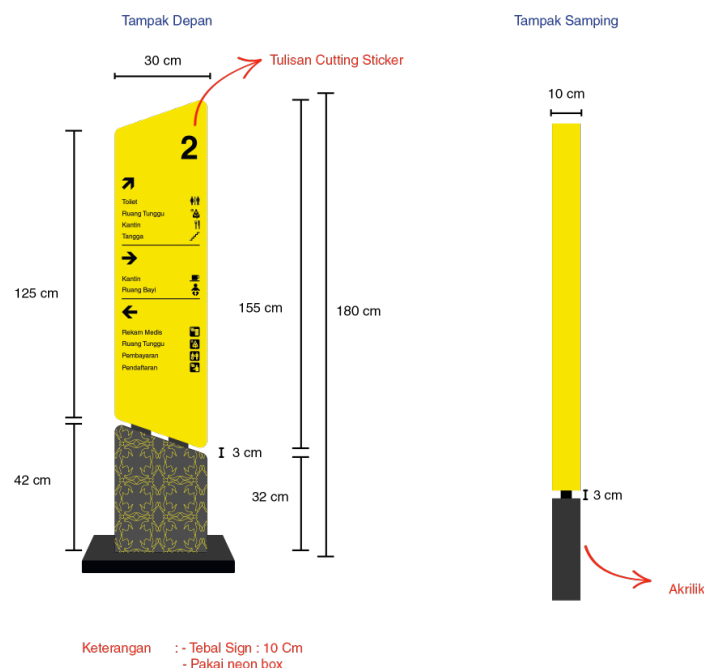


Figure 4 Identification Sign
Source: Situmorang and Swasty, 2016

The design of directional signage for freestanding are also made like neon box. For the suspended sign is similar to identification sign, only the content and the size of the signage are different. On the wall mounted sign, each floor are having two sign board installed. When the patient is on the first floor, only signage numbered one which contain an arrow while the board that containing the number two only give message of any rooms that available on the second floor, as well as the form of signage that leads upward to help directing patients when they want to go to room that is listed on that board, it meant the room was on the next floor (Figure 5).

While interpretative signage is made with freestanding type which shape is similar to the freestanding on the directional signage, however the only difference of signage is the content of signage which is different in the form of building interior map along with the room description. Signage is placed in the room such as the lobby and corridors in a hospital building.



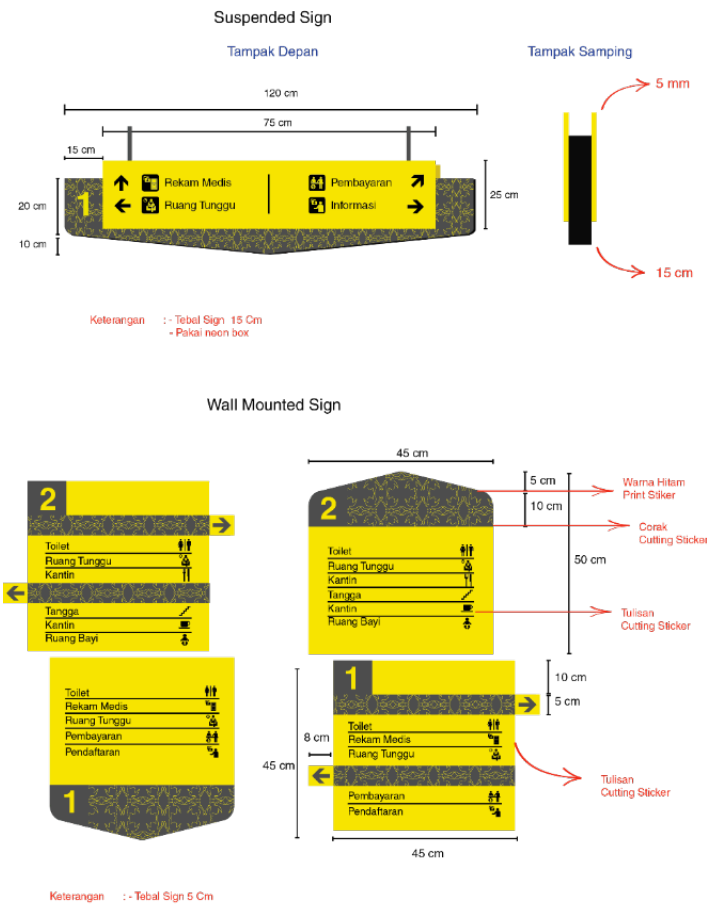


Figure 5 Directional Sign
Source: Situmorang and Swasty, 2016

Moreover, regulatory of signage contains message rules and restrictions such as "no smoking", "do not litter" and "No taking pictures". Signage for freestanding containing the message "no parking", "no entry" will be placed in outdoor and only placed with an iron pipe with a diameter of 1.5 inches and for the wall mounted type of signage will be installed in the room, especially in the patient waiting room.

Meanwhile the warning signage shows prohibition messages such as "Beware of Radiation" and the message pointer "fire extinguisher". This signage is in the form of wall mounted sign type and will be installed on laboratory area for the message "radiation alert" and each corridor of hospital building, especially near inpatient room for signage containing the message "fire extinguisher".

Operational signage shows polyclinic open hours and for the patient's visit schedules. Signage that contains the patient's visit schedule is placed in a nurse station in each building which have inpatient rooms, while for the polyclinic open schedule will be put on the doctor's office door (Figure 6).

68 **Rama Sadrah Situmorang, Wirania Swasty: Signage and Wayfinding Design**
of DR. H. Kumpulan Pane Regional General Hospital in Tebing Tinggi North Sumatera

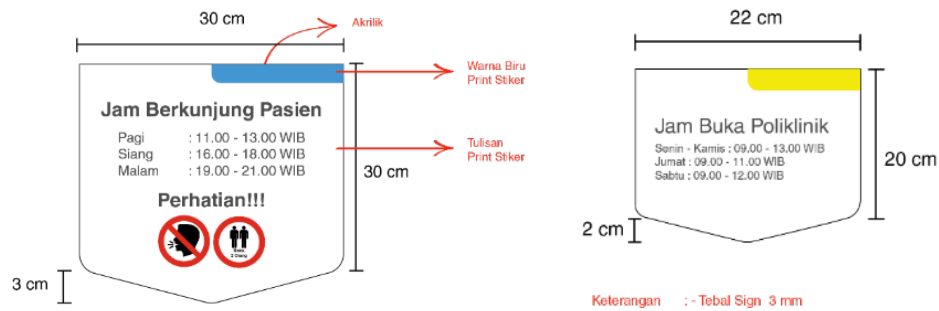


Figure 6 Operational Sign
Source: Situmorang and Swasty, 2016

CONCLUSION

Based on the results of the research that has been done, it can be concluded several things as follows: the priority in designing signage should be delivering the message that is communicative and informative. For buildings and the built environment, which allows visitors to experience a state of panic, it's better to design the signage considered to be more informative elements than decorative elements. A clean, hygienic and simple theme are used in the design of the signage inside hospital buildings to be in aligned with the impression of a clean and hygienic building image.

Cananga flower pattern, and the combination of yellow cananga flower and black from the Nias parrots is used in this design which is the typical icon of North Sumatra. This is intended that the existing signage at the Hospital Dr. H. Kumpulan Pane in Tebing Tinggi has its own character. The design of signage made by inserting text and images. This is intended to facilitate the respondents to see and understand the contents of messages of the signage quickly. This opinion is supported by the questionnaires results distributed. Signage should be adjusted to the respondents who will see the signage so that the messages of the signage can be accepted by the respondent.

Design signage that has been made but there are still many flaws. Material used in the design of signage is still standard, due to consideration of minimizing production costs. The form of signage itself still play in secure zone due to consideration of the informative aspects not decorative. For the next research, is interesting to learn how important the local identity of a region is raised in the signage design of a public facilities building and other built environment.

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